

WHAT IS CLAIMED IS:

1 1. A system for monitoring pressure of tires mounted on a vehicle by
2 comparing a detected tire pressure, detected by a pressure sensor installed at each of
3 the tires, with a predetermined value to determine whether the detected tire pressure
4 is proper, comprising:

5 a first temperature sensor, installed at at least one of the tires, that detects
6 internal temperature of the tire;

7 a second temperature sensor, installed at the vehicle, that detects ambient
8 temperature at a place where the vehicle locates; and

9 value correcting means for correcting the predetermined value based on a
10 difference between the detected tire internal temperature and ambient temperature,
11 when the tire pressure is to be adjusted.

1 2. A system according to claim 1, wherein the value correcting means
2 corrects the predetermined value such that the predetermined value is increased with
3 increasing difference between the detected temperatures.

1 3. A system according to claim 2, wherein the value correcting means
2 corrects the predetermined value such that the predetermined value is increased as
3 the detected tire internal temperature rises above the detected ambient temperature.

1 4. A system according to claim 1, wherein the predetermined value is set
2 based on a recommended cold pressure.

1 5. A system according to claim 1, wherein the value correcting means
2 corrects the predetermined value based on the difference between the detected
3 temperatures when it is determined to be in a state that the tire pressure is to be
4 adjusted stably.

1 6. A method of monitoring pressure of tires mounted on a vehicle by
2 comparing a detected tire pressure, detected by a pressure sensor installed at each of
3 the tires, with a predetermined value to determine whether the detected tire pressure
4 is proper, comprising the steps of:

5 detecting internal temperature of the tire;
6 detecting ambient temperature at a place where the vehicle locates; and
7 correcting the predetermined value based on a difference between the
8 detected tire internal temperature and ambient temperature, when the tire pressure is
9 to be adjusted.

1 7. A method according to claim 6, wherein the step of value correction
2 corrects the predetermined value such that the predetermined value is increased with
3 increasing difference between the detected temperatures.

1 8. A method according to claim 7, wherein the step of value correction
2 corrects the predetermined value such that the predetermined value is increased as
3 the detected tire internal temperature rises above the detected ambient temperature.

1 9. A method according to claim 6, wherein the predetermined value is set

2 based on a recommended cold pressure.

1 10. A method according to claim 6, wherein the step of value correction
2 corrects the predetermined value based on the difference between the detected
3 temperatures when it is determined that the vehicle is in a state that the tire pressure
4 is to be adjusted stably.

1 11. A computer program embodied on a computer-readable medium for
2 monitoring pressure of tires mounted on a vehicle by comparing a detected tire
3 pressure, detected by a pressure sensor installed at each of the tires, with a
4 predetermined value to determine whether the detected tire pressure is proper,
5 comprising the steps of:
6 detecting internal temperature of the tire;
7 detecting ambient temperature at a place where the vehicle locates; and
8 correcting the predetermined value based on a difference between the
9 detected tire internal temperature and ambient temperature, when the tire pressure is
10 to be adjusted.

1 12. A system for monitoring pressure of tires mounted on a vehicle having a
2 microcomputer or microprocessor that compares a detected tire pressure, detected by
3 a pressure sensor installed at each of the tires, with a predetermined value to
4 determine whether the detected tire pressure is proper, comprising:
5 a first temperature sensor, installed at at least one of the tires, that detects
6 internal temperature of the tire; and
7 a second temperature sensor, installed at the vehicle, that detects ambient

8 temperature at a place where the vehicle locates;
9 the microcomputer is programmed to correct the predetermined value based
10 on a difference between the detected tire internal temperature and ambient
11 temperature, when the tire pressure is to be adjusted.